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IN THE

Supreme Court of the United States

FESTO CORPORATION,

Petitioner,

v.

SHOKETSU KINZOKU KOGYO KABUSHIKI CO., LTD., A/K/A SMC CORPORATION AND SMC PNEUMATICS, INC.,

Respondents.

On Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

BRIEF OF MINNESOTA MINING AND MANUFACTURING COMPANY, ELI LILLY AND COMPANY, HENKEL CORPORATION, JOHNSON & JOHNSON, PFIZER INC., PPG INDUSTRIES, INC., REXAM BEVERAGE CAN COMPANY, SUN MICROSYSTEMS, INC., AND VERIZON COMMUNICATIONS INC., AS *AMICI CURIAE* IN SUPPORT OF PETITIONER

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QUESTIONS PRESENTED

1) Whether every claim-narrowing amendment designed to comply with any provision of the Patent Act – including those not related to prior art – automatically creates prosecution history estoppel regardless of the reason for the amendment; and

2) Whether the finding of prosecution history estoppel completely bars the application of the doctrine of equivalents.

AMICI CURIAE JOINING THIS BRIEF

Minnesota Mining and Manufacturing Company

Eli Lilly and Company

Henkel Corporation

Johnson & Johnson

Pfizer Incorporated

PPG Industries, Incorporated

Rexam Beverage Can Company

Sun Microsystems, Incorporated

Verizon Communications Inc.

Pursuant to Rule 29.6 of this Court, the parent corporations of the Henkel Corporation are Henkel of Americas and Henkel KgaA. The parent corporation of the Rexam Beverage Can Company is Rexam PLC. No other publicly held company owns 10% or more of the stock in these corporations.

The Minnesota Mining and Manufacturing Company, Eli Lilly and Company, Johnson & Johnson, Pfizer Incorporated, PPG Industries, Incorporated, Sun Microsystems, Incorporated, and Verizon Communications Inc. have no parent corporations, and no publicly held company owns 10% or more of the stock in these corporations.

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STATEMENT OF INTEREST

Amici are United States corporations of various sizes, involved in a variety of different businesses.[1] Some of them obtain relatively large numbers of United States patents every year (*e.g.*, 3M obtained 483 U.S. patents in 2000; Sun Microsystems obtained 465); some obtain far fewer. All have been involved in patent litigation, both as plaintiffs and as defendants.

Amici believe that meaningful patent protection is essential to encouraging investment in research and development, and that the doctrine of equivalents is a critical component of meaningful patent protection. The doctrine prevents the appropriation of inventions by competitors who use insubstantial changes to escape the literal terms of patent claims. Without such protection from free-riding competitors, companies will have significantly reduced incentives to undertake the costly research that precedes many breakthrough advances.

The decision below, however, effectively precludes resort to the doctrine of equivalents for all amended patent claims. It is hard to overstate the significance of the decision below. Of the approximately 1.2 million patents now in force, most were amended during their prosecution before the Patent and Trademark Office (PTO). John R. Thomas, *On Preparatory Texts and Proprietary Technologies: The Place of Prosecution Histories in Patent Claim Interpretation*, 47 UCLA L. Rev. 183, 188 (1999); see also Pet. App. 69a (Michel, J., concurring-in-part, dissenting-in-part) (same). When they

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[1] The parties have consented to the filing of this brief, and letters of consent are being filed herewith. In accordance with Supreme Court Rule 37.6, *amici* represent that no counsel for a party authored this brief in whole or in part and no person or entity, other than *amici*, their members, or their counsel made a monetary contribution to the preparation or submission of this brief.

amended these patents, today's patent owners understood that they were *not* surrendering their right to use the doctrine of equivalents to protect their investments in their patented technology. See *Hughes Aircraft Co.* v. *United States*, 717 F.2d 1351 (Fed. Cir. 1983). Despite this settled expectation, the decision below strips owners of amended patents of this right in order to promote the supposedly "paramount" interests of notice and certainty.

Amici believe that the decision below will have far-reaching adverse effects on their research and development efforts. The ultimate goal of the patent law is to promote innovation, and this Court has long recognized that innovation is best fostered by balancing the need for fair notice against the need for meaningful patent protection. By drastically altering this balance, the decision below has unleashed a major change in industrial policy without proper study or justification.

Amici submit that this Court should reinstate the flexible bar approach to prosecution history estoppel. Claim-narrowing amendments designed to ensure compliance with the Patent Act should not automatically bar application of the doctrine of equivalents. Rather, courts should examine the reason for an amendment to determine whether the patentee surrendered subject matter and, if so, the extent of that surrender. This approach will restore the longstanding balance between notice and meaningful protection, and will leave it to Congress, with its greater expertise, to decide whether that balance should be changed.

INTRODUCTION AND SUMMARY OF ARGUMENT

The majority ruled that any amendment that narrows a claim for any reason relating to patentability operates as a complete bar to any range of equivalents for the amended claim element. In its subsequent decisions, the Federal Circuit has confirmed the sweeping nature of this new rule.

First, virtually all amendments (except perhaps those that correct typographical errors) "narrow" a patent claim. This is vividly illustrated by the decision in *Glaxo Group Ltd.* v. *Ranbaxy Pharmaceuticals, Inc.*, No. 00-1151, 2001 WL 936347 (Fed. Cir. Aug. 20, 2001). There, the patent in suit originally recited a drug compound "in highly pure, substantially amorphous form." *Id.* at *3. When the examiner objected that this phrase was indefinite because it did not indicate "how much crystalline material is permitted," *id.* at *5, the patentee amended the claim to recite "in amorphous form essentially free from crystalline material." *Id.* at *1. Although the amendment merely clarified the original language, the court deemed it a "narrowing" amendment because the "essentially free" language had been imported from a dependent claim. *Id.* at *3.

Similarly, virtually all amendments relate to patentability. The *Festo* majority explained that "[b]ecause a claim will not issue unless it satisfies the requirements of section 112, an amendment made to satisfy the statute is an amendment made for a reason related to patentability." Pet. App. 52a. By this logic, all clarifications, no matter how trivial, made to overcome a § 112 indefiniteness objection "relate to patentability," and thus foreclose resort to the doctrine of equivalents. See *id.* at 58a (Plager, J., concurring) ("patentability" is "a term now broadly defined").

Moreover, to show that an amendment was unrelated to patentability, a patentee must rely "*solely* upon the public record of the patent's prosecution." Pet. App. 47a.[2] Because this requirement did not exist when patentees prosecuted their patents, they had no reason to ensure that the public record reflected the reason for an amendment. See *Warner-Jenkinson Co.* v. *Hilton Davis Chem. Co.*, 520 U.S. 17, 41 (1997) (Ginsburg, J., concurring). In fact, because applicants and examiners often discuss amendments over the telephone,

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[2] Unless otherwise indicated, all emphases have been added.

and because "examiners are notoriously terse when abstracting such interviews," Thomas, *supra* at 190, the owners of existing patents will rarely be able to satisfy this new standard.

Thus, as the Federal Circuit's subequent decisions confirm, the decision below eliminates resort to the doctrine of equivalents for most current patents. See Pet. App. 69a (Michel, J., concurring-in-part, dissenting-in-part).[3] This is precisely what the majority intended. In announcing its complete bar rule, the majority asserted that, during the past 20 years, "the notice function of patent claims has become paramount, and the need for certainty as to the scope of patent protection has been emphasized." *Id.* at 24a. Believing that "certainty will stimulate investment in improvements and design-arounds," *id.* at 30a, the majority sought to promote the supposedly "paramount" goals of notice and certainty by "rein[ing] in the doctrine of equivalents." *Id.*

The paramount goal of the patent laws, however, is to promote innovation, and that goal is served by balancing the interests of fair notice and meaningful protection. The doctrine of equivalents, in turn, is an essential component of meaningful patent protection. By significantly restricting the availability of the doctrine, the majority has fundamentally altered the well-settled economic incentives that drive the research and development necessary to most innovation, thereby encouraging derivative and trivial improvements at

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[3] That the complete bar rule applies only to amended claims elements does not limit the decision's impact. For example, most patents consist of a series of claims that derive from, or are "dependent" upon, a smaller number of "independent" claims. Because independent claims reflect the broadest statement of an invention, examiners typically focus on, and request amendments to, these broad claims. Any amendment to an independent claim thus "narrows" the many other claims that depend on that claim. *See Mycogen Plant Science, Inc.* v. *Monsanto Co.*, No. 00-1127, 2001 WL 910389, at *3 (Fed. Cir. Aug. 14, 2001).

the expense of costly breakthroughs and inventive design-arounds.

The majority failed to justify this fundamental change in patent policy. This Court long ago adopted the substance, if not the modern nomenclature, of the flexible bar approach, and the majority failed to show otherwise. Nor have notice and certainty recently become "paramount" goals of the patent laws. This Court has long recognized the importance of notice and certainty, yet that recognition has always co-existed with the recognition that the doctrine of equivalents is crucial to fostering innovation. In fact, in *Warner-Jenkinson*, this Court rejected precisely the types of bright-line rules the majority embraced.

Similarly, there is no merit to the suggestion that the flexible bar approach is somehow "unworkable." That approach involves a straightforward and practical inquiry that courts and competitors can and do perform regularly. No change in the law has undermined the conceptual underpinnings of the rule or rendered it irreconcilable with competing legal doctrines. A rule cannot be deemed "unworkable" merely because the outcomes of individual cases turn on specific facts.

Ultimately, any change in the balance between fair notice and meaningful protection should be made by Congress. In the 1952 Patent Act, Congress necessarily approved the balance this Court had long struck, and in fact fine-tuned that balance in certain respects that favored patent protection over notice and certainty. Moreover, Congress has the institutional competence to assess the need for any adjustment in that balance and the ability to tailor any adjustment to particular industries or circumstances.

I. THE DECISION BELOW DRASTICALLY ALTERS THE BALANCE THE PATENT LAWS STRIKE BETWEEN MEANINGFUL PATENT PROTECTION AND FAIR NOTICE.

In its decision below, the majority sought to cabin the doctrine of equivalents in order to promote the supposedly "paramount" interests of notice and certainty. Pet. App. 24a-30a. Contrary to the majority's view, however, the "ultimate goal of the patent system" is to foster innovation and "bring new designs and technologies into the public domain through disclosure." *Bonito Boats, Inc.* v. *Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989). This truly paramount goal requires a careful balance between notice and certainty on the one hand, and meaningful patent protection on the other hand. Because the doctrine of equivalents is essential to meaningful patent protection, the majority's drastic new limitation on its availability skews the economic incentives that drive the research and development necessary to true innovation.

A. To Foster Innovation, Patent Law Must Provide Both Meaningful Protection And Fair Notice.

As this Court has explained, the patent system fosters innovation through "a carefully crafted bargain." *Id.* at 150. Because an inventor can "keep his invention secret and reap its fruits indefinitely," the law gives inventors exclusive rights to practice inventions for a limited period of time in exchange for "disclosure and the consequent benefit to the community." *Id.* at 151. "The attractiveness of such a bargain, [however,] and its effectiveness in inducing creative effort and disclosure of the results of that effort, depend almost entirely on a backdrop of free competition in the exploitation of unpatented designs and innovations." *Id.*

This "carefully crafted bargain" "balances competing concerns." Brief for the United States as *Amicus Curiae*, 1996 WL 172221, at *12, *Warner-Jenkinson Co.* v. *Hilton Davis Chem. Co.*, 520 U.S. 17 (1997) (No. 95-728) ("US

Warner-Jenkinson Br."). To promote innovation, "a patent must provide meaningful protection for the disclosed invention, or inventors will choose to keep their inventions secret." *Id.* Yet a patent must also provide "notice of the nature and limits of the exclusive rights it creates" so that others will know what they may "safely use." *Id.* at *12-*13.

The tension between these competing interests is "inherent in any patent system that requires a fixed, written description of the invention (*i.e.*, a 'claim')." Donald S. Chisum, *The Scope of Protection for Patents After the Supreme Court's Warner-Jenkinson Decision: The Fair Protection—Certainty Conundrum*, 14 Santa Clara Computer & High Tech. L.J. 1, 7 (1998). On the one hand, "lack of clarity can impede legitimate investment in technology-based products and services. On the other hand, strict and literal adherence to the written claim in determining the scope of the protection can invite subversion of a valuable right," thereby destroying the incentive to invent. *Id.* Indeed, "[p]atent protection that can be easily circumvented is antithetical to building a strong research-based industrial economy." Harold C. Wegner, *Equitable Equivalents: Weighing the Equities to Determine Patent Infringement in Biotechnology and Other Emerging Technologies*, 18 Rutgers Computer & Tech. L.J. 1, 31 (1992).

B. The Doctrine Of Equivalents Is Essential To Meaningful Patent Protection.

As this Court has long recognized, the doctrine of equivalents is essential to providing the meaningful protection necessary to induce the creation and disclosure of inventions. Because "[o]utright and forthright duplication is a dull and very rare type of infringement," the doctrine prevents appropriations of inventions by those who use "unimportant and insubstantial changes" to escape the literal terms of a patent claim. *Graver Tank & Mfg. Co.* v. *Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950). To protect patentees from literal infringement alone, this Court has explained, "would

place the inventor at the mercy of verbalism[,] . . . . would deprive him of the benefit of his invention and would foster concealment rather than disclosure of inventions, which is one of the primary purposes of the patent system." *Id.*

The last half century has confirmed the wisdom of this Court's observation that, without the doctrine of equivalents, patent protection is "a hollow and useless thing." *Id.* "Countries in which patent infringement suits play a role acknowledge the importance of equivalents." Heinz Bardehle, *Equivalents and International Patent Law Harmonization*, 20 AIPLA Q. J. 119, 120 (1992). Thus, the European Patent Convention applies the doctrine of equivalents to European patent claims.[4] Indeed, the United States has sought worldwide application of the doctrine through its delegation to the World Intellectual Property Organization Committee of Experts on Patent Harmonization. Paul J. Otterstedt, *Unwrapping File Wrapper Estoppel in the Federal Circuit: A New Economic Policy Approach*, 67 St. John's L. Rev. 405, 421 (1993).[5] The United States "seeks to encourage foreign nations that provide patents under their own laws to United States citizens and corporations to afford patent protection commensurate with that provided in the

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[4] The Protocol on Article 69 of the Convention states that this Article, which defines the scope of patent protection, "should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claim." European Comty., *Protocol on the Interpretation of Article 69 of the Convention* (Oct. 5, 1973), *reprinted in* 4 Eur. Union L. Rep. (CCH) ¶ 5791 (July 13, 1976). *See also* Bardehle, *supra* at 120 (although the Protocol does not use the name "equivalents," the "inclusion of equivalents is intended").

[5] The World Intellectual Property Organization Draft Treaty specifically sets forth, in Article 21, this Court's "function-way-result" test for equivalence. *See* Edward G. Fiorito, *WIPO Experts Make Progress on Patent Harmonization Draft*, 41 Pat. Trademark & Copyright J. (BNA) 231, 238 (1990).

United States by the doctrine of equivalents." US *Warner-Jenkinson* Br. at *1-*2.

C. By Restricting The Doctrine Of Equivalents, The Decision Below Discourages The Research Necessary To Develop Breakthrough Inventions.

In adopting its complete bar rule, the majority believed that certainty as to the scope of a narrowed claim "will stimulate investment in improvements and design-arounds," and will ensure that "technological advances" will not go "wasted and undeveloped due to fear of litigation." Pet. App. 30a. Although it recognized that a flexible bar "affords the patentee more protection," the majority did not "believe that th[is] benefit outweighs the costs of uncertainty." *Id.* This terse cost-benefit analysis fails to take into account the role the doctrine of equivalents plays in promoting the type of breakthrough inventions that make subsequent "improvements" and "design-arounds" possible.

The federal patent system, and the constitutional grant of authority from which it is derived, are based on the recognition that "[i]nvention is an uncertain business," and that, "[t]o spur investment in it, inventors must be reasonably assured that they will be able to recoup their costs and earn a profit." Rochelle C. Dreyfuss, *Dethroning Lear: Licensee Estoppel and the Incentive to Innovate*, 72 Va. L. Rev. 677, 679 (1986), see also Richard P. Rozek, *Protection of Intellectual Property Rights, in Intellectual Property Rights in Science, Technology and Economic Performance* 31, 35 (Francis W. Rushing & Carole G. Brown eds., 1990) ("[T]o bear th[e] uncertainty" of the innovative process, "some possibility for a reward must exist. If innovators are not rewarded, they will not create . . . ."). Without the reward of meaningful patent protection, inventors face the risk that their truly pioneering inventions will "be used by free-riding competitors . . . that have not shared in the expense of creating intellectual property." Alden F. Abbott, *Developing a Framework for Intellectual Property Protection to Advance*

Innovation, in Intellectual Property Rights in Science, Technology and Economic Performance 311, 317 (Francis W. Rushing & Carole G. Brown eds., 1990). Absent protection from free-riders, "firms have weak incentives to absorb the costly expenditures needed to develop intellectual property." *Id.* They "run the risk that . . . their innovations w[ill] earn insufficient profits to offset the losses stemming from failed research efforts," and "capital markets w[ill] be far less willing to provide funds for independent research efforts." *Id.* at 321.

Indeed, studies from the 1980s showed that, even when the Federal Circuit was applying its flexible bar, over half of all patented inventions were imitated within three to four years of introduction, and the average costs of imitation ranged from 65 to 75 percent of the innovator's costs. *Id.* at 324 (citing studies). These studies confirm that the degree of patent protection "directly affects the profitability of R&D projects and thus the resources allocated to R&D. Utlimately, the degree of protection determines the expected number of new products [and] processes . . . ." Rozek, *supra* at 44.

The majority's complete bar rule fundamentally alters established economic incentives in a manner that favors derivative "improvements" at the expense of major advances that require significant investments of time and money. Curtailing the availability of the doctrine of equivalents limits the protection afforded patentees, and thus increases the risk that inventions requiring large investments will be appropriated by imitators. That risk will inevitably deter investment in the research and development that leads to many major advances, as well as to the numerous "spillover" benefits that such efforts spawn. See Wegner, *supra* at 31 (weak patent protection "is antithetical to building a strong

research-based industrial economy").[6] The complete bar rule thus discourages bold and costly innovation, and encourages minor improvements that do not entail large investments in research and development.

Similarly, the complete bar rule discourages, rather than encourages, inventive design-arounds. The rule invites imitators to appropriate an invention by making "'unimportant and insubstantial'" changes to amended claim elements. See Pet. App. 105a (Michel, J., concurring-in-part, dissenting-in-part). Such changes are not "technological advances," *id.* at 30a, but rather are trivial variations intended to avoid patent infringement. By contrast, the doctrine of equivalents prompts competitors who seek to design around patented inventions to make their own *inventive* contributions. See *Yarway Corp.* v. *Eur-Control USA, Inc.*, 775 F.2d 268, 277 (Fed. Cir. 1985) ("the incentive to 'design around' patents is a positive result of" patent protection); Abbott, *supra* at 320 (strong patent protection "caus[es] some firms to try to invent around patents. . . . [thus] engendering product and process improvements or additional innovative goods and services").

In short, the majority's complete bar rule works a sea-change in the economic incentives that drive the research and development necessary to most innovation, and thus works a sea-change in the nation's industrial policy. The majority offered no cogent justification for this fundamental change.

II. THE MAJORITY'S DRAMATIC ALTERATION OF THE BALANCE BETWEEN MEANINGFUL PATENT PROTECTION AND FAIR NOTICE IS UNJUSTIFIED.

Despite the sweeping implications of its decision, the majority offered little justification for its complete bar rule. It

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[6] Studies have shown that, "because of spillovers of information," "the return to society on R&D is frequently much higher than the return to the innovating firm." Abbott, *supra* at 324, 325.

asserted that no decision of this Court required adherence to a flexible approach to prosecution history estoppel, and that, during the past 20 years, "the notice function of patent claims has become paramount, and the need for certainty . . . has been emphasized." Pet. App. 24a. The majority further asserted that the flexible bar approach had proved "'unworkable.'" *Id.* at 25a. None of these claims withstands scrutiny.

A. This Court's Decisions Preclude Adoption Of The Complete Bar Rule.

As Judge Michel explained in detail, this Court long ago embraced, in substance if not in name, a flexible approach to prosecution history estoppel. That is, in applying the principles that are now known by the name "prosecution history" or "file wrapper" estoppel, the Court considered the scope of subject matter surrendered by an amendment of patent claims and whether any range of equivalents remained available in light of that surrender. The majority offered no meaningful response to Judge Michel's showing.

1. This Court Has Embraced A Flexible Bar Approach to Prosecution History Estoppel.

Without canvassing all of the cases Judge Michel cited, it suffices to discuss two in order to demonstrate that, contrary to the majority's view, this Court has embraced a flexible approach to prosecution history. In *Goodyear Dental Vulcanite Co.* v. *Davis*, 102 U.S. 222 (1880), the Court considered whether a dental plate made of celluloid infringed a patent claiming a dental plate made of vulcanized rubber. To answer that question, the Court considered not only the language of the claim and specification, but amendments to the claim made during the reissue process. The original claim had specified a plate made "of rubber, *or some other elastic material*," *id.* at 224-25. The patentee, however, had amended the claim to specify a plate "'of hard rubber, or

vulcanite, *i.e.*, an elastic material,'" and explained that "'[t]he vulcanizing process makes all the difference.'" *Id.* at 227-28.

Under the majority's complete bar rule, this amendment alone would have made it unnecessary to consider whether celluloid was equivalent to vulcanized rubber. This Court, however, acknowledged that the patentee was still entitled to some range of equivalents for this amended element, *id.* at 230, and deemed it "essential" to determine what material the patentee had claimed as part of his invention "and what can be considered an equivalent therefor." *Id.* at 224. Indeed, although the Court ultimately found that celluloid was not equivalent to "'hard rubber, or vulcanite,'" *id.* at 228 (quoting claim), it stated that "substances[] other than rubber . . . might have been an equivalent." *Id.* at 227.

In *Hurlbut* v. *Shillinger*, 130 U.S. 456 (1889), the Court found infringement under the doctrine of equivalents despite the fact that the patentee had amended the specification and claim, and expressly disclaimed part of the reach of his original claim. *Id.* at 463. The patent, which concerned a method for forming concrete paving blocks, claimed an "'arrangement of tar-paper or its equivalent between adjoining blocks of concrete,'" *id.*, such that individual blocks could be removed without disrupting adjacent blocks. The original specification stated that "'the tar-paper may be omitted and the blocks formed without interposing anything between their joints.'" *Id.* The patentee later disclaimed "the forming of blocks from plastic material without interposing anything between their joints while in the process of formation." *Id.* Again, under the majority's complete bar rule, this amendment and disclaimer would have precluded *any* finding of infringement by equivalents. This Court ruled, however, that "the temporary use of [a] trowel or cutting instrument, to divide [concrete] blocks, is the equivalent of the tar-paper of the Shillinger patent." *Id.* at 469.

In both cases, therefore, this Court considered what range of equivalents remained available despite claim amendments

(or a disavowal of a claim's reach). Both cases thus stand for the proposition that even claim amendments directly relating to patentability do *not* foreclose all resort to the doctrine of equivalents.

2. The Majority Did Not And Cannot Distinguish This Court's Prior Cases.

The majority dismissed the import of *Goodyear* by asserting that "[t]he Court did not discuss prosecution history estoppel, but simply decided that under the language of the reissued patent celluloid was not equivalent to 'hard rubber vulcanite or its equivalent.'" Pet. App. 17a. The absence of the phrase "prosecution history estoppel" in *Goodyear*, however, does not alter the substance of the Court's reasoning. The salient fact is that, even though the patentee had amended his claim to recite "hard rubber, *i.e.*, vulcanite," the Court expressly indicated that the patentee might be entitled to enforce the patent against substances "*other than* rubber." This statement cannot be reconciled with the majority's view that no range of equivalents is available for an amended claim. Moreover, as Judge Michel explained, Pet. App. 79a (Michel, J., concurring-in-part, dissenting-in-part), the precursor phrase "file wrapper estoppel" first appeared in *Exhibit Supply Co.* v. *Ace Patents Corp.*, 315 U.S. 126 (1942), a case that cites *Goodyear* as the first in a line of cases establishing the estoppel doctrine. *Id.* at 137. Thus, this Court itself has recognized that *Goodyear* applied the concept of prosecution history estoppel, and it plainly did so in a flexible manner.

The majority's attempt to distinguish *Hurlbut* also fails. Because the claim at issue recited the element of "'tar-paper, or its equivalent,'" the majority concluded that this Court found literal infringement, not infringement by equivalence. Pet. App. 17a. But this Court quoted *Schillinger* v. *Greenway Brewing Co.*, 17 F. 244 (C.C.N.D.N.Y. 1883), which explained that the equivalence lay not in the types of materials (*i.e.*, that a trowel was equivalent to tar-paper), but

in the *types of separation*. The specification made clear that the tar-paper was *permanently* interposed. See *Hurlbut*, 130 U.S. at 462 (quoting specification). The *Greenway Brewing* court explained, however, that "'the interposition of the trowel, *though temporary*, was an equivalent for the tar-paper, *even though the joint was left open after the trowel was removed.*'" *Id.* at 467 (quoting *Greenway Brewing Co.*). Thus, in stating that it would be improper "[t]o limit the patent to the *permanent* interposition of a material equivalent to tar-paper," *id.* at 465, this Court endorsed the finding that the defendant's temporary separation was equivalent to the permanent separation claimed. This Court thus applied the doctrine of equivalents despite an express disclaimer concerning the claim's scope.

In short, the reasoning in both cases, and the holding in *Hurlbut*, reflect this Court's recognition that a range of equivalents may be available for an amended claim element. For this reason alone, the majority's complete bar rule should be rejected.

B. Notice And Certainty Have Not Recently Become Paramount Goals Of The Patent Laws.

Unable to distinguish this Court's prior decisions, the majority below implied that an intervening change in the law has robbed them of controlling effect. Contrary to the majority's claim, however, notice and certainty have not recently become paramount interests under the patent laws. This Court has recognized the importance of notice and certainty for over a century, and that recognition co-existed with, rather than displaced, the recognized importance of the doctrine of equivalents. Moreover, in its most recent overhaul of the patent laws, Congress promoted patent protection at the expense of notice.

1. This Court Long Ago Recognized The Importance Of Notice And Certainty.

The majority below claimed that, during the past 20 years, "the notice function of patent claims has become paramount, and the need for certainty . . . has been emphasized." Pet. App. 24a. Yet, from the dawn of the doctrine of equivalents itself, this Court has recognized that notice and certainty are important interests under the patent laws. In *Winans* v. *Denmead*, 56 U.S. (15 How.) 330 (1853), this Court adopted the doctrine over a vigorous dissent warning that deviation from the language a patentee uses to specify his invention would give rise to uncertainty "productive of oppressive and costly litigation, of exorbitant and unjust pretensions and vexatious demands." *Id.* at 347 (Campbell, J., dissenting). The "public interest" required "[f]ulness, clearness, exactness, preciseness, and particularity, in the description of the invention," the dissent argued, so that others may know the "restraints . . . th[e] patent impose[s]" and "industry . . . may freely exert itself." *Id.* These, of course, are precisely the same concerns that the majority cited below. Pet. App. 28a-29a; see also Chisum, *supra* at 10 (noting that the "debate in *Winans* has a remarkably contemporary tone").

Similarly, shortly after passage of the Consolidated Patent Act of 1870, ch. 230, 16 Stat. 198, with its express requirement that patentees "particularly point out and distinctly claim" their inventions, *id.* § 26, 16 Stat. at 201, this Court emphasized the notice function of claims and the importance of certainty. In the seminal case of *Merrill* v. *Yeomans*, 94 U.S. 568 (1876), this Court stated that the "distinct and formal claim is . . . of primary importance[] in the effort to ascertain precisely what it is that is patented." *Id.* at 570. "The growth of the patent system in the last quarter of a century," the Court explained, "has reached a stage in its progress where the variety and magnitude of the interests involved require accuracy, precision, and care in the preparation of all the papers on which the patent is founded."

Id. at 573. Expressly referring to the concept of "fair notice," the Court stated that "[t]he public should not be deprived of rights supposed to belong to it, without being clearly told what it is that limits these rights," and that other inventors "should not be restrained by vague and indefinite descriptions of claims in existing patents from the salutary and necessary right of improving on that which has already been invented." *Id.*

This emphatic recognition, which was repeated in numerous subsequent cases,[7] co-existed with, rather than displaced, this Court's continued reliance on the doctrine of equivalents. See, *e.g.*, *Goodyear*, 102 U.S. at 230 (noting, just three years after *Merrill*, that a patentee is "protected against equivalents for any part of his invention"). Indeed, nearly 75 years after *Merrill*, this Court re-affirmed the validity and necessity of the doctrine in *Graver Tank*. It did so, moreover, over another vigorous dissent that reiterated the themes announced a century earlier in the *Winans* dissent, and that the majority below would endorse as "paramount" half a century later. See 339 U.S. at 617 (Black, J., dissenting) (warning that "judicial expansion of precise patent claims" "sets the stage" for exorbitant demands, and exposes manufacturers to "the peril of heavy infringement damages").

As this history makes clear, the fact that notice and certainty are important interests under the patent system is not a recently discovered truth. This Court has long recognized the importance of these interests. Unlike the majority, however, this Court has also recognized that these interests must be balanced against the need for meaningful patent protection in order to achieve the patent law's truly paramount goal of promoting innovation.

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[7] *See, e.g.*, *White* v. *Dunbar*, 119 U.S. 47, 51-52 (1886); *General Electric Co.* v. *Wabash Appliance Corp.*, 304 U.S. 364, 369 (1938); *Union Carbon Co.* v. *Binney & Smith Co.*, 317 U.S. 228, 236 (1942).

2. In Its 1952 Amendments To The Patent Statute, Congress Favored Patent Protection Over Notice And Certainty.

In its 1952 amendments to the patent laws, Congress did not deem notice paramount or excessively emphasize the importance of certainty. To the contrary, in at least one significant respect, Congress favored patent protection over notice and certainty.

As this Court recognized in *Warner-Jenkinson*, Congress enacted the so-called "means" claiming provision of the 1952 Patent Act, 35 U.S.C. § 112, ¶ 6, to overturn the decision in *Halliburton Oil Well Cementing Co.* v. *Walker*, 329 U.S. 1 (1946). That case had "rejected claims that 'do not describe the invention but use "conveniently functional language at the exact point of novelty."'" *Warner-Jenkinson*, 520 U.S. at 27 (quoting *Halliburton*, 329 U.S. at 8). *Halliburton* itself followed the decision in *General Electric Co.* v. *Wabash Appliance Corp.*, 304 U.S. 364 (1938), quoting the phrase "'conveniently functional language at the exact point of novelty'" from this earlier case. See *Halliburton*, 329 U.S. at 8 (quoting *Wabash*, 304 U.S. at 371). *Wabash*, in turn, made clear that the flaw in "means" claiming language is that it does not provide adequate notice of the invention claimed. The *Wabash* Court stressed that "[t]he limits of a patent must be known" in order to "guard against unreasonable advantages to the patentee and disadvantages to others arising from uncertainty as to their rights." 304 U.S. at 369. Patented inventions, the Court explained, "require precise descriptions of the new characteristics for which protection is sought." *Id.* "Means" claims violated these requirements by failing to "convey[] definite meaning to those skilled in the art." *Id.* at 372.

In overturning *Halliburton*, therefore, Congress permitted claims that this Court had condemned because they allegedly failed to apprise the public of the scope of the claimed invention. In doing so, Congress expressly stated that

"means" claims covered means disclosed in the specification "and equivalents thereof." 35 U.S.C. § 112, ¶ 6. Thus, Congress plainly chose to promote the protection of patentees over the interests served by notice and certainty. Indeed, the 1954 commentary of Patent Examiner P.J. Federico, upon which this Court relied in *Warner-Jenkinson*, see 520 U.S. at 28, explains that § 112, ¶ 6 was adopted to ensure "some measure of greater liberality in the use of functional expressions in combination claims," and that this represented an "enlargement" of claims. *Commentary on the New Patent Act*, 75 J. Pat. & Trademark Off. Soc'y 161, 186 (1993) (1954).

3. This Court's Recent Decisions Demonstrate That Notice And Certainty Are Not The "Paramount" Aims Of The Patent Laws.

Finally, this Court's most recent decisions in no way rendered notice and certainty "paramount." To be sure, both *Warner-Jenkinson* and *Markman* v. *Westview Instruments, Inc.*, 517 U.S. 370 (1996), refer to the notice function of claims and the importance of certainty. But these references, like comparable references in many cases before *Graver Tank*, are fully consistent with continued recognition of the importance of the doctrine of equivalents.

Indeed, in *Warner-Jenkinson* itself, this Court confirmed that notice and certainty are *not* the primary objectives of the patent laws. The Court considered, and rejected, no fewer than three proposed bright line limitations on the doctrine of equivalents. Specifically, the Court rejected the proposed rules that equivalents must be disclosed in the specification, 520 U.S. at 37, that equivalents must be known at the time the patent issues, *id.*, and that prosecution history estoppel applies to all amendments regardless of the reason for the amendment. *Id.* at 30-33. With respect to the latter rule, the Court explained that the fact that a "rule might provide a brighter line for determining whether a patentee is estopped under certain circumstances *is not a sufficient reason for*

adopting such a rule." *Id.* at 33 n.6. In language fully applicable to the complete bar rule, the Court emphasized that the prosecution of all extant patents may have been conducted in reliance on a flexible approach to estoppel, and that, "[t]o change so substantially the rules of the game now could very well subvert the various balances the PTO sought to strike when issuing the numerous patents which have not yet expired." *Id.*

Similarly, in creating a rebuttable presumption that unexplained amendments were made for substantial reasons related to patentability, this Court necessarily countenanced some uncertainty concerning the scope of amended patent claims. The Court adopted this presumption because of the notice and definitional functions of claims. *Id.* at 33. Yet, it contemplated that the reason for unexplained amendments – *i.e.*, those for which no explanation can be found in the record before the PTO – could be developed at an evidentiary hearing. See *id.* at 34 (noting patentee's possible need for a "further opportunity to establish such reasons"); *id.* at 41-42 (Ginsburg, J., concurring) (contemplating evidentiary showing despite the fact that the PTO never recorded the reasons for an amendment).[8] Until such reasons are adduced, however, competitors cannot be certain of the reason for an amendment or the scope of the surrender it effected.

In short, while this Court recognized the importance of notice and certainty and expressed concern over unbridled application of the doctrine of equivalents, *id.* at 28-29, it consistently rejected rigid bright line rules that would have categorically precluded resort to the doctrine of equivalents.

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[8] The majority's insistence that the reason for an amendment appear in the file wrapper completely undermines this Court's presumption. If a reason appears in the record before the PTO, the amendment is not "unexplained." The presumption only applies "where the record seems *not* to reveal the reason for" the amendment, 520 U.S. at 33. Yet in that circumstance, the majority has barred the introduction of evidence, thereby ensuring that the presumption cannot be rebutted.

C. The Flexible Bar Approach Is Not Unworkable.

Even if it were not bound by this Court's prior use of the flexible bar rule – and plainly it was – the court below still had no basis for jettisoning a flexible bar as "'unworkable.'" Pet. App. 25a. In fact, the flexible bar involves a straightforward, practical inquiry that courts and competitors can and do readily perform. That the outcome of individual cases under such an approach turns on the facts of each case does not establish that the approach is unworkable.

1. The Flexible Approach Involves A Straightforward And Practical Inquiry.

As the decisions in *Goodyear* and *Hurlbut* illustrate, the flexible approach to prosecution history estoppel involves determining whether the patentee surrendered subject matter when amending a claim and, if so, the extent of the surrender. The scope of subject matter surrendered is logically and appropriately analyzed under estoppel principles. Those principles, however, apply with different force depending upon whether an amendment is made to overcome prior art objections (which always implicate the scope and patentability of the claimed invention) or enablement and indefiniteness objections (which typically do not).

Faced with an examiner's assertion that the breadth of a claim renders it invalid in light of prior art and that the claim must therefore be narrowed, the applicant can either contest the examiner's assertion by administrative appeal or acquiesce. If the applicant acquiesces, a person of skill in the art would understand the applicant to have conceded that the art was material and invalidating. Accordingly, once the patent issues the patentee is properly "estopped" from claiming that an accused product or process that employs a structure or method disclosed in the cited prior art is an infringing equivalent of the narrowed claim element. By acquiescing in the objection, the patentee has conceded that

the claim is valid because the narrowed element is different from the structures or methods disclosed in the cited art.

As the United States has explained, however, amendments made to overcome enablement or indefiniteness objections stand on a different footing:

> The purpose of the enablement requirement is not to limit the scope of the patent right, but to ensure that the invention has been fully disclosed so that, upon the patent's expiration, the public can practice the invention. Similarly, "when claim changes or arguments are made in order to more particularly point out the applicant's invention, the purpose is to impart precision. . . . Such prosecution is not presumed to raise an estoppel, but is reviewed on its facts . . . ."

US *Warner-Jenkinson* Br. at *22 (quoting *Pall Corp.* v. *Micron Separations, Inc.*, 66 F.3d 1211, 1220 (Fed. Cir. 1995)). In such cases, the proper inquiry is whether a person of ordinary skill in the art would understand an amendment made for reasons of enablement or specificity to constitute a surrender of patentable subject matter.[9] Two examples illustrate how this practical inquiry is made.

Suppose an applicant invents a novel device for sensing and responding to light, and drafts a broad claim reciting, among other things, "a light sensor." The examiner objects that this element is not enabled because the specification only discloses a visible light sensor, not one capable of sensing ultraviolet light. If the applicant responds by narrowing the

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[9] Because the "[s]tatute and case law regarding novelty, obviousness and enablement require that the examiner (and the courts) use the perspective of a hypothetical person of ordinary skill in determining patentability, . . . consistency requires that this perspective . . . should govern estoppel as well." Ted Apple, *Enablement Estoppel: Should Prosecution History Estoppel Arise When Claims Are Amended to Overcome Enablement Rejections?*, 13 Santa Clara Computer & High Tech. L.J. 107, 126 (1997) (footnotes omitted).

claim to "a *visible* light sensor," rather than challenging the rejection, a person of skill in the art would reasonably conclude that the applicant's invention did not encompass an ultraviolet light sensor. If it did, the applicant could have drafted the specification to disclose such a sensor, and in fact would have had strong incentives to do so if such means had not previously existed in the context of the invention. In light of this history, the patentee should be estopped from claiming that a device that senses ultraviolet light is equivalent to the claimed visible light sensor.

By contrast, suppose an applicant seeks a patent for the invention of storing telephone call routing information in centralized databases, rather than in local telephone switches where such information has previously been stored. The applicant claims a method in which local switches send queries to a central database for the appropriate routing information and, as part of the claim, includes the step of "sending such queries over a data network." The examiner objects on enablement grounds because the specification discloses a particular type of data network, which is the only one in existence at the time of the application. The applicant amends the claim to recite the particular type of network. A person of skill in the art could not reasonably conclude from this history that the patentee had disclaimed sending queries over later-developed data networks. The applicant could not have been expected to predict how such networks would later evolve. See US *Warner-Jenkinson* Br. at *23 n.7 ("when an accused equivalent . . . could not have been known because it was developed or discovered only after the patent issued, the case for application of the doctrine of equivalents becomes especially clear").

Similarly, if two interchangeable data networks existed at the time of the application, and the applicant amended the claim to specify only one in response to an enablement objection, a person of skill in the art would not reasonably conclude that the applicant had disclaimed use of the other

known network. The applicant had every reason to assume that the interchangeability of the other network would be known to others skilled in the art and would be captured as an infringing equivalent. The applicant thus had no reason to incur the expense and delay of an administrative appeal to challenge the erroneous enablement objection, and any failure to do so would not reasonably be viewed as a concession, contrary to obvious fact, that the unclaimed network was not equivalent to the one claimed. Thus, as the United States has explained, the failure "to specify or to claim all known equivalents . . . should not necessarily estop [a patentee] from obtaining protection under the doctrine of equivalents." *Id.* at *23.

In short, the inquiry surrounding the surrender of subject matter is a practical one, guided by the well-established perspective of those skilled in the art. As *amici* explain next, there is nothing unworkable about such a standard.

2. This Straightforward And Practical Inquiry Is Not Unworkable.

In abandoning the flexible bar approach adopted in *Hughes Aircraft Co.* v. *United States*, 717 F.2d 1351 (Fed. Cir. 1983), the majority misapprehended the standard of "unworkability" that justifies deviations from *stare decisis*. Although *stare decisis* is "not an inexorable command," *Payne* v. *Tennessee*, 501 U.S. 808, 828 (1991), adherence to precedent is "a cardinal and guiding principle," *California* v. *FERC*, 495 U.S. 490, 499 (1990). *Stare decisis* applies with particular force here, where the judicial doctrine at issue is derived from and implements statutory standards of patentability, and Congress is free to modify that doctrine at any time. See *Patterson* v. *McLean Credit Union*, 491 U.S. 164, 172 (1989) ("[c]onsiderations of *stare decisis* have special force in the area of statutory interpretation"). Indeed, "[c]onsiderations in favor of *stare decisis* are at their acme" in this case, which involves property rights developed in reliance on judicial precedent. *Payne*, 501 U.S. at 828.

As this Court has explained, statutory precedent may not be abandoned unless "intervening development of the law" has "removed or weakened the conceptual underpinnings from the prior decision" or "rendered the decision irreconciliable with competing legal doctrines." *Patterson*, 491 U.S. at 173. In upsetting significant property interests predicated on statutory precedent, the majority below made no such findings, nor could it have done so. The flexible bar rule is simply an extension of the doctrine of equivalents, a doctrine just recently re-affirmed by this Court that rests on the empirically confirmed recognition that adequate patent protection is essential to innovation. See *supra* at 9-10. The conceptual underpinnings of the flexible bar rule thus remain as strong as ever. Nor is the rule "irreconcilable" with the policies of notice and certainty. Rather, this Court has long recognized that the rule can and must co-exist with these policies in order to promote innovation.

Unable to make the requisite findings, the majority cited the "difficulty under the flexible bar approach in predicting with any degree of certainty the scope of surrender that will be found when prosecution history estoppel applies." Pet. App. 25a. This supposed difficulty does not justify abandoning a settled rule of law. There is always a degree of uncertainty in predicting the outcome of individual cases under legal standards, such as the standard of reasonable care, that turn on fact-specific inquiries.

More fundamentally, the uncertainty the majority deems "unworkable" is not a function of the flexible bar approach, but of the doctrine of equivalents itself. This is illustrated by the majority's example of a claim that originally recites "a value 'less than twenty,'" but is amended to recite "a value 'less than five'" in light of prior art disclosing a value of fifteen. Pet. App. 28a-29a. According to the majority, it is "impossible" to determine whether a value of fourteen is equivalent to the claimed value of five. *Id.* at 29a. The uncertainty, however, would be identical if a never-amended

claim recited a value of five and was asserted against a value of fourteen.

Thus, the majority's "determination" that a flexible bar approach is "unworkable" is nothing less than a charge that the doctrine of equivalents itself is "unworkable."[10] This Court, however, rejected that argument when it upheld the doctrine in *Warner-Jenkinson*. The majority's claim that the availability of the doctrine of equivalents for amended claims "'poses a direct obstacle to the realization of important objectives,'" Pet. App. 26a (quoting *Patterson*, 491 U.S. at 173), is thus foreclosed by controlling precedent. It is also wrong: the doctrine is essential to, not a "direct obstacle" to, the goal of fostering innovation. See *supra* at 7-11.

Nor is the uncertainty as great as the majority contends. Contrary to the majority's claim, there is in fact a "metric to determine what subject matter was given up" by amendment. Pet. App. 28a. It is the understanding that a person of ordinary skill in the art would have based on the prosecution history. The fact that courts have long used this precise perspective to determine the validity of patents, see *supra* at 22 & n.9, confirms that an estoppel standard employing this same perspective does not entail an unworkable degree of uncertainty.

In short, the majority's dramatic alteration of the balance between meaningful patent protection and fair notice – and its equally dramatic dilution of significant property interests developed in reliance on that balance – was unjustified.

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[10] Judge Plager acknowledges this fact, explaining that it is the "insubstantial differences" test of equivalence that is "unworkable." *See* Pet. App. 61a-62a (Plager, J., concurring) ("the decision on equivalence remains essentially a subjective call. . . . This to me is the antithesis of the rule of law.").

III. ANY ADJUSTMENT IN THE BALANCE BETWEEN MEANINGFUL PROTECTION AND FAIR NOTICE IS FOR CONGRESS TO MAKE.

If there is to be an adjustment in the balance this Court has long struck between meaningful patent protection and fair notice, it should be made by Congress, not the courts.

Although the doctrines of equivalents and prosecution history estoppel are judge-made, Congress necessarily incorporated these doctrines in the 1952 Patent Act. *Graver Tank* was decided in 1950. Not only is Congress presumed to have been aware of this Court's then-recent determination that the doctrine of equivalents was consistent with statutory claiming requirements, see *Lorillard* v. *Pons*, 434 U.S. 575, 581 (1978), the doctrine was explicitly raised during consideration of the 1952 Act in connection with the permissibility of so-called means-plus-function claims. See *Patent Law Codification and Revision: Hearings on H.R. 3760 before Subcomm. No. 3 of the House Comm. on the Judiciary*, 82d Cong. 95 (1951) (Testimony of T. Brown, Chief, Patent Litigation Unit, Claims Division, Department of Justice) (noting that proposed § 112, ¶ 6 "introduces into the statute for the first time the controversial doctrine of equivalents"). Thus, as this Court has previously recognized, Congress "left intact the entire body of [pre-1952] case law on direct infringement," including infringement by equivalents. *Aro Mfg. Co.* v. *Convertible Top Replacement Co.*, 365 U.S. 336, 342 (1961).

Similarly, Congress must be understood to have implicitly endorsed the pre-1952 balance this Court struck between meaningful patent protection and fair notice. In this regard, it is noteworthy that Congress fine-tuned the balance between the rights of inventors and competitors. Most notably, it permitted "means" claiming that this Court had condemned as insufficiently precise to afford adequate notice of claimed inventions. See *supra* at 18-19. In addition, Congress overruled several decisions strictly construing the standards

of novelty in order to introduce an "attitude more favorable to patents." Federico, *supra* at 183. In light of this careful and nuanced congressional attention to the proper balance between the rights of inventors and competitors, the courts are not at liberty to introduce significant new limitations on the availability of the doctrine of equivalents, or to alter in any significant manner a balance between competing interests that Congress has approved. Cf. *Square D Co.* v. *Niagara Frontier Tariff Bureau, Inc.*, 476 U.S. 409, 420 (1986).

Congress posssesses far greater institutional competence and experience than the courts to make any adjustments to that balance. The availability of the doctrine of equivalents bears significantly on the economic incentives that drive investment in research and development efforts. Those investments, in turn, affect the nation's economy. Thus, restrictions on the availability of the doctrine of equivalents implicate fundamental issues of industrial policy. Such issues, of course, lie outside the competence of the judiciary, and are properly entrusted to the political branches.

In fact, just six years after passing the 1952 Patent Act, Congress studied the role of patents in stimulating invention and the impact of patent protection on research and development efforts.[11] More recently, Congress has considered bills that would have adjusted patent protections in specific industries, such as biotechnology.[12] Unlike courts, Congress can conduct investigations into these and related subjects, which call for empirical study, and it can adopt carefully tailored changes that alter investment incentives in

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[11] *See* Subcomm. on Patents, Trademarks, and Copyrights, Senate Comm. on the Judiciary, 85th Cong., *An Economic Review of the Patent System: Study No. 15* (Comm. Print 1958), and *The Impact of the Patent System on Research: Study No. 11* (Comm. Print 1958).

[12] *See, e.g.*, Biotechnology Patent Protection Act of 1991, H.R. 1417, 102d Cong. (1991); Patent Competitiveness and Technological Innovation Act, H.R. 5598, 101st Cong. (1990).

particular industries or fields of study. Similarly, Congress can study the impact of a complete bar rule, the number of patents it will affect, the extent to which it will upset settled expectations and the nature of those expectations, and its likely effect on current and future investment decisions. For all of these reasons, any adjustment in the longstanding balance between meaningful patent protection and fair notice can and should be made by Congress alone.

CONCLUSION

For all of the foregoing reasons, the Court should reverse the lower court's ruling that all claim amendments relating in any way to patentability foreclose resort to the doctrine of equivalents for any amended claim element.

Respectfully submitted

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